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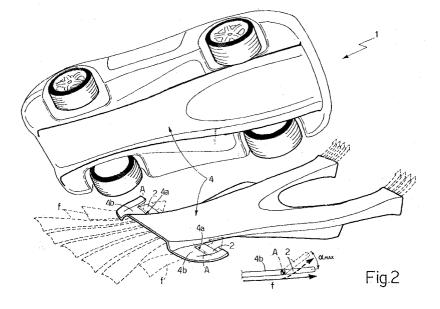
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(54) Vehicle with movable spoilers

(57) A vehicle (1) with movable spoilers, the vehicle having at least one spoiler (2, 3) movable between a minimum-angle position producing a minimum increase in vertical load, and a maximum-angle position producing a maximum increase in vertical load; and a spoiler actuating device (5) for adjusting the position of the spoiler (2, 3) between the minimum-angle position and

maximum-angle position as a function of the speed of the vehicle (1); the spoiler actuating device (5) providing, up to a given maximum speed (V_0), for adjusting the position of the spoiler (2, 3) to increase the vertical load as speed increases, and for maintaining the vertical load at a substantially constant given value (C_0) as long as the speed of the vehicle (1) exceeds the maximum speed (V_0).





EUROPEAN SEARCH REPORT

Application Number EP 01 13 0124

		DERED TO BE RELEVAN ndication, where appropriate,		CI ACCIDIOATION OF THE		
Category	of relevant pass		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)		
A	PATENT ABSTRACTS OF vol. 9, no. 128 (M- 4 June 1985 (1985-6 -& JP 60 012380 A (22 January 1985 (19 * abstract; figures	1-5	B62D35/02			
Α	DE 38 28 752 A (ZIF 1 March 1990 (1990- * the whole documer	-03-01)	1-5			
A	US 5 322 340 A (SAT 21 June 1994 (1994- * abstract; figures	06-21)	1-7			
Α .	US 4 810 022 A (TAK 7 March 1989 (1989- * abstract; figures	03-07)	1-5			
A	PATENT ABSTRACTS OF vol. 9, no. 238 (M- 25 September 1985 (-& JP 60 092993 A (24 May 1985 (1985-0 * abstract; figures	416), 1985-09-25) NIPPON SOKEN), 15-24)	1-4	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B62D B60T		
	The greenst accept report has be	peop drawn up for all claims				
	The present search report has be	Date of completion of the sea	rch	Examiner		
		19 July 2002				
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EP 01 13 0124

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19-07-2002

	Patent document cited in search repo		Publication date		Patent family member(s)	Publication date
JР	60012380	Α	22-01-1985	NONE		
DE	3828752	A	01-03-1990	DE	3828752 A1	01-03-1990
US	5322340	A	21-06-1994	JP JP DE	3164245 B2 5330457 A 4317769 A1	08-05-2001 14-12-1993 27-01-1994
US	4810022	Α	07-03-1989	JP JP JP DE	1012715 B 1525914 C 60209369 A 3512378 A1	01-03-1989 30-10-1989 21-10-1985 17-10-1985
JP	60092993	Α	24-05-1985	NONE	N MAX ANN ANN ANN ANN ANN ANN ANN ANN ANN A	

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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